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NORMAL SCHOOLS AND TRAINING SCHOOLS.

A NORMAL School is, or ought to be, an institution, in which future teachers are to be fitted out for their vocation. It is, or ought to be, a strictly professional school, and the science and art of Pedagogy are its sole legitimate province. All other sciences and arts that are at all admissible in its course of studies, can be only of an auxiliary nature; and ought to be presupposed rather than taught, their sole object in the Normal School being that of a repetition with a view toward their application in Pedagogy. The science of Pedagogy itself is not to be taught from a purely scientific point of view. Its study is not to be carried on for the sake of original investigation on the part of the pupil; no new truths are to be discovered, no new foundation and construction of scientific subjects are to be established, the philosophy of education is not to be remodeled through the agency of the pupil teachers—all these purposes belong to the University where future Superintendents, Training Teachers, Principals of Normal and High Schools are to be formed. No, the science of Pedagogy is, in Training Schools, to be taught only from the standpoint of its contemporaneous development, in an experimental way; it is the experiences of the best present teachers and mental philosophers as regards education

which are to be exemplified, experimentally illustrated and based upon a sound philosophy of the growth of the human mind. This science must be imparted by the way, it must accompany the learner's practical exercises in the art of teaching and educating, it must result from the pupil teachers' own observation during his experiments in self-active teaching, and must be completed by a training teachers' critical remarks upon those performances, and by his example of model teaching. The practical training school is the real Normal School. Such at least is the view taken of the latter in Europe and among all the most progressive educators in the New World.

How then can it be accounted for that most of the so-called Normal Schools in our country are mere Academies, or High Schools, in which any amount of sciences and arts may be acquired, from books and rehearsals, but no practical training for a teacher's calling; that, with a few exceptions, like that of Oswego, N. Y., Westfield, Mass., and a few others, these schools are no training schools at all; that most of them graduate pupils with a certificate of capability for teaching, without any of those pupils ever having given any evidence of practical fitness for the education of children? The answer is not difficult to find. The great majority of applicants for admission to Normal Schools come with a most insufficient preparation for their studies, even without the elementary abilities such as the upper grades of Grammar schools impart. They are nevertheless admitted into a Preparatory class in which those deficiencies are first supplied. And this is done at so late an age, that it can not be sufficiently done in the one Preparatory year; it becomes therefore a necessity to continue High School branches even in the Normal Classes themselves. Besides, these candidates for a teacher's certificate are impatient; they cannot afford to devote more than one and a half, or two, hardly ever three years time to their professional education. Thus it is that their studies must be hurried on, and that practical training is crowded out of the plan of studies. No expert will deny that these are facts.

But why do not the Normal Schools fix a higher grade of scholarship as a condition for admission of pupils, and

do away entirely with preparatory classes? Are there no schools where a sufficient degree of scholarly attainments for a future teacher can be gained? Why, certainly, there are the High Schools, and the better Academies. Why then should the State or the community be taxed twice for having one and the same kind of preparatory schools for teachers when one would suffice? Can the people afford to throw away money, which it is usually so hard to get for the improvement of education?

If those who best know for what reason this lack of economy is tolerated would speak out, they would have to confess that it is done for fear of obtaining too few candidates for admission to the Normal Schools. The position of teacher is not enviable enough to attract a full complement of the best talent and character with a sufficient standard of preparation. The managers of the present Normal Schools are satisfied with what candidates they can get for fear of getting none at all, or too few to cover expenses.

Yet, according to the experience reported by some State and County Superintendents, this evil may gradually be remedied. Wherever the standard of admission has been gradually raised, a supply of candidates does not fail to appear. The same would be the case where the course of studies was extended from two years to three. Even if for a time the number of applicants and students should fall off a little, an increase of the number could be looked for afterwards. It may confidently be expected from the fact that a good professional training will secure to the graduates higher and better salaried positions in schools.

There would then not seem to be any good reason why Normal Schools should not drop their preparatory classes, fix a higher standard of scholarship for admission, and confine their course of studies to a strictly professional training. All that is wanted for so desirable an end is a little courage and firmness of purpose, on the part of Boards of Education and principals of Normal Schools.

If a Normal School is to deserve its name, it must be connected with a graded public school, the teachers of the latter to be exclusively pupil teachers, who instruct and educate their classes under the guidance of a Principal Training

Teacher, with perhaps one or several assistants. The course of procedure in training must consist—1, in model lessons given now and then in each grade or class of the public school, by the Training Teacher, in the presence of all the pupil teachers of the lower grade, while the other grades of the public school are taught by pupil teachers of the upper grade, in presence of one or two pupil teachers of the same grade; 2, in trial lessons given in each grade or class of the public school by pupil teachers of the lower grade alternately, in presence of the Training Teacher and the other pupil teachers of the same grade—these trial lessons to be afterwards criticized mutually by the pupil teachers in conclave under the guidance of the Training Teacher; 3, in theoretico-practical lectures given now and then by the Training Teacher, in which is suggested the most expeditious way of privately studying such sciences and arts as the pupil teachers are yet backward in, but which are indispensable to their calling. While about three-fifths of the day's doings of pupil teachers should be practical—giving or witnessing lessons in the public school—one-fifth should be critical, and the remaining fifth a lecture; or employed by the Training Teacher in the correction of some written or oral exercise of the pupil's *seriatim* before all the class of pupil teachers; or else a rehearsal of some scientific topic or artistic task to be performed by the pupil teachers in turn. All the real studies should be carried on at home.

It is evident that such Normal Training Schools would be much more economical than those now in vogue. In the first place, the money which now goes toward sustaining the preparatory class of the Normal School is saved; in the second place, the money expended for salaries for one or two dozens of teachers of the public school connected with the institution is saved. But the greatest saving consists in rearing a class of teachers who are doubly and trebly worth their salaries, because of the better kind of work they perform. If the salaries of teachers must be raised, as a consequence thereof, the people in their gratitude will not grudge this increased outlay.

There may be those who fear that a public school admin-

istered almost exclusively by pupil teachers cannot be a good school. But experience derived in Swiss and German Normal Schools connected with public schools goes far to prove that the contrary is the fact. If the Training Teacher is what he ought to be, the whole institution will be an organism: one spirit will pervade both training school and public school. It will then not matter whether the teachers in the public school are changing from day to day, or even from lesson to lesson, since the system and methods of education used by them do not change. But, what is of the greatest importance, there is an efficiency of inspection and control over its body of teachers such as no other school can have. No single lesson can be delivered without the presence of a number of severe critics, and no teacher can succeed without thus learning the secret of his power, the art of perfect self-control.

The objection may be raised that in our country there is a lack of training teachers who are up to the standard demanded by such a system. But we are sure that the required talent, if not yet extant, can be developed, if the compensation be sufficient.

We are confident that the position taken in the foregoing statements cannot be shaken; yet we will welcome the most severe criticism, since it will furnish us with an opportunity of more clearly explaining our position.

ADOLF DOUAI.

THE disposition to be made of the Japanese Indemnity Fund is quite generally discussed, and the proposition of Prof. Henry to devote it to the foundation of an American College in Japan is meeting with much favor. The fund now amounts to about $800,000, and a few more installments are yet due. It was paid by the Japanese government in satisfaction for an attack by one of the Daimios upon a U. S. vessel. The real amount of damage did not, however, exceed, $20,000, and it is desired to restore the balance to the Japanese government. In view of the efforts made by Japan to advance education, the founding of an American College, as proposed, would be a very appropriate disposition to make of the money.

*OBJECT LESSONS.**

EACH exercise in object lessons should be conducted with a view to forming habits of attention and careful observation through the use of the senses.

FORM.—In Nature's school, children first learn to know things as wholes; they learn to know their parts afterward. The teacher who would be successful must follow Nature's plan of instruction. Present, therefore, common objects as wholes, and lead the pupils to notice resemblances in shape, first; afterward direct their attention to prominent differences.

A Box of Forms and Solids, containing forty-eight plane Forms and fifteen Solids, has been prepared for the special purpose of *Object Teaching*. This is the most important aid in illustrating the various forms and solids.

Select the Form to be taught from the Box of Forms, and lead the pupils to observe it, then tell them its name; next require them to mention other objects having the same shape. Proceed in this manner with each Form and Solid, and continue these exercises until the pupils can recognize and name each.

COLOR.—The pupils should be led to distinguish resemblances and differences in color from "colored cubes," or cards, and to group together objects of like colors. They should also learn the names of the six principal colors.

OBJECTS.—The lessons on *Common Objects* in this grade should be simple and conversational, treating only of their most obvious parts and uses. Such common objects as a bell, chair, slate, pencil, hat, cup, knife, etc., are appropriate for this purpose. The pupils should be led to notice and point out the principal parts, and encouraged to tell what they see and what they know of each object shown them.

HUMAN BODY.—In this Grade the lessons on the Human Body should lead the pupils to notice and name the parts, as head, neck, trunk, arms, hands, legs, feet; also parts of

* From "How to Teach. A Manual of Methods."

the head, as crown, face, forehead, cheeks, chin, mouth, nose, eyes, ears, etc.

DRAWING AND WRITING.

DRAWING ON SLATES, ETC.—The exercises of *Drawing* and *Printing on slates* should be introduced in such a manner as to give an interesting variety to the class-work; also, so as to aid in the discipline of the class, by giving the children something *to do* that will interest them after they have become tired with their other lessons. The children might be allowed to use slates for drawing, as a reward for good order and attention. Short daily exercises may be made very useful.

MANAGEMENT.

LENGTH OF EXERCISES.—The exercises of this Grade should not be continued upon the same subject longer than fifteen minutes at one time, without materially changing the manner of the exercise.

DISCIPLINE.—Young children cannot attend to the same thing for a long time without change in the form of attention. Their natural activity demands frequent changes in the position of the body; also constant but varied employment. If the teacher does not furnish the needed employment and changes of position by variety in her methods of instruction, the children will seek to gratify their needs by play. Therefore children *should never be compelled to sit without employment, either for the mind, the hands, or the body.*

Children should be led to do right by encouragement rather than driven by fear. Judicious praise is more efficient than scolding. Teach them to be cleanly, mannerly, truthful, and obedient. Let good examples of these traits be commended frequently.

SUBJECTS OF THE NINTH GRADE.—LANGUAGE.

READING.—The manner of teaching *Reading* during the first term in which books are used by the pupils, has a very important influence on the future progress of those pupils. In the processes of instruction, only one difficulty should be presented to the pupils at a time. Among the difficulties which children have to encounter during their first lessons in reading from books, are, learning *to know the words at*

sight, so as to pronounce them readily; learning *to know what the words and sentences mean;* learning *to read in such a manner as to imitate good conversation.*

First Step.—With each new reading lesson the first step should be to make the pupils familiar with the words of the lesson, by printing them on the blackboard in columns, and teaching the children to pronounce them at sight; next teach them to pronounce at sight the same words in the book, but out of their order in the sentences of the lesson, lest they learn them by rote, instead of by sight,

Second Step.—Train the pupils to find out what each sentence means, and to tell the meaning in *their own* language.

Third Step.—Train the pupils to read each sentence so that the reading may resemble good conversation. Finally, when the lesson has been read in a proper manner, the teacher should talk with the children about it, and encourage them to tell, in their own language, what they have read.

N. B.—*Let the standard for good reading be its near resemblance in manner to good conversation.*

PHONETICS.—The object of exercises in Phonetics should be the same in this grade as in the preceding—to secure a ready recognition of the several sounds of our language, and the ability to utter them distinctly in conversation and reading. Time should not be wasted in the endeavor to teach children definitions or descriptions of the various sounds of letters.

Let the chief aims of the teacher be, to train the organs of hearing to acuteness in the perception of sounds, and the organs of speech to flexibility and accuracy in producing sounds.

DEFINITIONS.—During the lessons of this grade, it is appropriate to teach the children to use the principal words of the lesson in brief sentences, to enable them to show readily that they understand what the words mean, as: "A horse can draw a *cart*."—"I must be *good*."—"I can *hold* a book."—"*Snow* is white."—"I will try to *learn* to read."—"I must *obey* my mother," etc., etc. Such exercises will be found to be much more useful to young children than teaching them

formal definitions to be recited. The meaning of difficult or unusual words must, of course, be *explained* and *illustrated* by the teacher.

SPELLING.—In oral spelling, the words should be distinctly pronounced by the pupil before they are spelled, then each letter clearly uttered, *a pause made between the syllables*, and the word again pronounced after all the letters have been given. The familiar words taught, in addition to those in the reading lessons, should include such appropriate words as the children most commonly hear and use. These should be printed or written on the blackboard by the teacher, and copied by the pupils, on their slates. The same words may also be spelled orally.

The chief use of spelling consists in writing words; therefore, as early as possible, it should be taught by writing. As the first step in this direction, let pupils commence in this grade to *study spelling lessons by copying the words on slates.*

THOSE not accustomed to be applied to by very young lady teachers for advice have little idea of their extravagant notions regarding salaries. They often expect from $800 to $1,000 and a home to commence with, a salary which can be commanded only after years of successful experience and drill. It is strange but true that young men just starting out as teachers are much more moderate in their demands; they realize that in teaching as in everything else beginners must commence at the bottom and work up. The advice of an old pedagogue to these young lady teachers is, to accept any position which offers salary enough to support them, and increased experience and preparation for work will bring increased salary. There is no reason why a good female teacher should not receive as much as a good male teacher. The cause of the difference in salary is, we suspect, that the men are more thoroughly prepared for their profession than the women. They expect to make their living by their calling and fit themselves accordingly, while the women expect to teach for a short time only, and do not think it worth while to devote much time to preparation.

CORPORAL PUNISHMENT.

A NEW Jersey Teachers' Institute recently resolved, by a vote of 41 to 1, that the law prohibiting the infliction of corporal punishment upon pupils should be repealed. By many this will be regarded as a retrograde movement, and in one sense it is such; whether it is wise and justifiable or not is an open question. It is universally admitted that punishment of some sort is necessary; the question is, what mode of punishment is best suited to attain the end sought, the good of all the pupils.

The Superintendent of the Chicago schools in September, 1872, requested the public school teachers to dispense with the use of the rod, and to rely for order on moral suasion, and in extreme cases on suspensions and expulsions. We have before us an account by a Chicago principal of the manner in which this system worked, an account which, although not official, we take to be trustworthy. He carefully examined his school, and decided that twenty-five boys were the cause of all the serious trouble, and he decided that, in justice to the other pupils, to his assistants and to himself, those boys should be removed from school, permanently if he could accomplish it, when opportunity offered. When occasion came he impressed upon the delinquents, and upon their parents when they could be reached, that the common good demanded their removal, and that he would do all in his power to continue the suspension in force, unless a strong desire was shown for an opportunity of retrieving lost character. Twenty boys were thus suspended; eleven of them were soon restored. Of the nine who did not return, one was sent to a private school, and four were put to work. Of the others nothing is known to the principal. Fifteen others were temporarily suspended but were subsequently restored. Here then we have a system of discipline which, instead of inflicting corporal punishment upon offenders, turns them out of school, or, when practicable, places them in reformatory institutions. The question is, is this system, or the one which permits corporal punishment the most efficacious,

when viewed as to its present effects and future consequences.

In inflicting punishment we must bear in mind that the penalty imposed is not for the injury of the offender but for his good, to teach him to correct his faults, and for the good of others who may take warning by his example. In the former of these requisites the Chicago system is, we think, lacking. Many a man has been made good by being thought so; instead of making his reputation, his reputation has made him, and the same principle holds true when a man has a worse reputation than he deserves. He either thinks that the struggle after virtue, for which he receives no credit, is not worth the pains, or concludes that the world is right after all in its estimate of him, and he is content to live up, or rather down, to his reputation. This tendency will, we think, be most powerful for evil in a system of school discipline which publicly stamps a boy as irreclaimable. It makes him irreclaimable, and throws him as a pest upon society. There are, however, the other pupils, those who are not vicious and who are contaminated by the example of the bad boys; their rights are to be considered, and they are not to be needlessly exposed to evil influences. There are two ways of fitting a man for life, one is to keep him as a boy from all hurtful associations, and to send him out into the world innocent, and with the belief that all the world is innocent. The other way is to let him be cognizant of the evil there is in the world, and which he will meet at every turn. The first is, we must acknowledge, much the pleasanter picture to contemplate; but we think a young man brought up to know that he will find bad as well as good in his intercourse with men, is much better prepared to resist evil. Let us not be understood to advocate placing a boy among evil influences; we are only asserting the wisdom of bringing him up as he will have to live, with the good and bad both about him.

The really vicious boys are few. Disorder in school is caused more by thoughtlessness than by a set purpose to do wrong. For the correction of such misdemeanors the Chicago system trusts to moral suasion. This is, we admit, the best manner to deal with such faults when it is possible,

but we do not think it practicable in large schools. To exercise this influence, teachers must have a personal acquaintance with their pupils, which is rarely obtainable. They are related only as teacher and pupil, and cannot, except in rare instances, influence each other as friends. To obtain this necessary acquaintance requires time, which the teachers do not have at their disposal. Their time and energies are to be given to instruction: order is to be preserved, that this may be most effectually done, but it is not to be made the chief part of the teacher's duty. We would not be understood as advocating the frequent use of the rod, but the permission to use it when necessary. The very permission would diminish the number of little offenses which it is designed to correct. It is an easy matter to decry such views, and to picture brutal instructors beating pupils severely, but cases of this kind are extremely rare, and the remedy for such conduct lies with parents. We regard corporal punishment as a necessary evil, as the only means by which boys in cities can be kept in school, and be made to preserve order. We do not favor it because we like it. To sum up, we think the Chicago system of discipline faulty, in that it either turns unruly pupils out of school, or sends them as acknowledged criminals to a reform institution, and that it provides no means for correcting small offences other than moral suasion, which the teacher is usually unable to exert.

THE drawings of the Boston public school children recently exhibited in Horticultural Hall have attracted much attention, and have been warmly commended. Every public school in the city was represented by work from all the classes, except the two lower primary. The general excellence of the work considered merely as drawings was great, but interest in the exhibition was more especially awakened by the number of original designs, many of which evinced great proficiency. If the account of the excellence of these designs is accurate, as we have reason to believe it to be, drawing will take a prominent place among our common school studies.

THE WASTES OF THE UNIVERSE.

MR. PROCTOR, our own well-known astronomer, after delivering above a hundred astronomical lectures in the United States, has been summing up in New York the general lessons which astronomy teaches as to the divine methods of creation, in a somewhat remarkable lecture on the principle of what would seem to men, judged by human standards, as divine waste. By "waste" he means, of course, not absolute fruitlessness, but the lavish employment of forces, acting on an immense scale, to produce results which seem comparatively very infinitesimal and very short-lived. When we say "*to* produce," we assume, perhaps, that what we regard as the end of creation *is* the end, simply because it is nearer akin to human ends. But what Mr. Proctor refers to is something of this sort:—In the first place, if Life of any kind at all resembling our own, is supposed to be one of the ends of physical nature, then it must be admitted that the spots in the universe where such life is possible are infinitely small, as compared with the spaces where such life is not possible. Concede, for instance, that such life can not exist except on the surface of solid worlds, and you admit at once not only that the subterranean interiors of all these worlds are, as far as such life is concerned, wasted, but that the vacuum of the intermundane spaces, of course far more vast than the infinitesimal continents of the globes scattered about amongst them, is for the same purpose "wasted." But Mr. Proctor goes much further. Assuming that, as far as we know anything whatever of the laws of physical life, a certain amount of heat and a tolerably dense atmosphere are necessary to it, while any very considerable excess of heat and any great deficiency of atmosphere would be fatal to it, Mr. Proctor at once excludes the great central suns from the class of habitable worlds, as being centres of heat far too intense for any thing like such life; while at the other extreme of the scale, he excludes a burnt-out ash like the moon, which has neither atmosphere nor water, from the category of worlds fit for any organization known to us. And even between

these limits Mr. Proctor finds but few planets which he thinks fit for such life as ours at the present moment. Venus and Mercury are both too much scorched up by the sun's rays, he holds, for any organization we know. Mars, if not already too cold, is fast becoming so, with his comparatively small supply of watery vapor, and his immense fields of winter snow. Jupiter and the other known major planets are still, says Mr. Proctor, glowing masses of detached solar fire, not sufficiently cooled down for their surface to be the abode of life of our sort. In short, except the planet Mars, which Mr. Proctor thinks nearly, if not quite, past the stage at which there is sufficient heat to support life like ours, and one of the satellites of Jupiter, and possibly an asteroid or two, Mr. Proctor does not hold it possible that any life of the kind we know now exists elsewhere in the Solar system. As for the other stellar systems, the stars themselves are centres of heat far too great for the existence of such life, and of their planets we know nothing. And he argues from analogy that but a very few even of the planets can be under the conditions which render organic life, as we know it, possible. At any one moment the vast majority of physical worlds in existence are, in Mr. Proctor's belief, unfit to support life, though each one of them may be, or may have been, for some small fraction of its career, the theatre of such life. The Earth, for instance, must have been unfit to support life for ages before it had cooled down sufficiently for the purpose, and, for ages after it shall have shrunk into the condition of the moon, it will again be unfit for the support of life. In a word, not only is the proportion of space devoted to organized life at any one moment an infinitesimal one, but if you take the career of any single world separately, you will find that its period of waste is an infinitude, in the midst of which its little age of habitability resembles a mere island in the wide and barren ocean of its desolation. The proportion of space utilized (if the support of organic life be the definition of "utilization") to waste space is infinitesimal; and the proportion of time utilized (in the same sense) to waste time, in the history of any one among the material worlds, is infinitesimal also. For the most part—this is Mr. Proctor's inference from his

astronomical surveys—the map of the physical universe is a map of vast solitudes, most of which—namely, the interstellar and intermundane spaces—were never adapted for organized life at all; while of the spots which are so adapted, the time during which there is a capability of supporting life is a mere narrow strip of isthmus between two infinite oceans of perpetual solitude, the infinite antecedent history of gradual preparation, and the infinite subsequent history of exhausted powers. According to this view, if life in any way like ours is the end of the material universe, almost the whole universe is either a blank, or a becoming, or a passing-away, and the portions of time and space in which organic life has appeared, but not yet passed away, count but for a few drops in the ocean of perceivable space and recordable time.

To an imagination bewildered, as human imaginations so often are, *not* with the infinite repose of the universe, the lavish expenditure of time and force on apparently small results, but rather with the hurry, the crowding, the human frettings and fumings of this vivid little world of misery and joy, there is something at first rather resting and solemn in thus realizing for ourselves the infinite tracts of space and time which seem secure from the invasions of the swarms of organic life. A fanciful mind might even expect the Earth herself to feel as if relieved of something of a fever-fit, after the comparatively short period during which she is fit for the support of organic life shall have elapsed, and the passionless calm of the lunar solitudes shall have succeeded to the tread of busy feet and the crush of eager appetites. But that, of course, would be the mere fancy of minds solicited by too many competing interests, and yearning for a better adjustment between their thirst for peace and their impulses to action. Still, Mr. Proctor's speculations are useful, if only for this purpose—that they help us to realize, *not* the smallness of human interests (for that is hardly the result of seeing how many ages of evolution have led up to them, even though as many more lead down from them to silence and desolation once more), but the infinite number of other and perhaps infinitely higher ends which are evidently included in the divine mind, besides those

with which we are able to any effect to concern ourselves.

Of course it does not follow that the worlds which Mr. Proctor believes to be destitute of organic life are so, simply because they are probably destitute of it in the sense which we attach to the word. There may be in other worlds millions and millions of organic beings to whom the heat of the solar temperature itself is only a pleasant stimulus, instead of instant destruction; there may be others to whom cold which would freeze mercury, and a darkness which would not admit of our recognizing each other's faces, are the acme of physical comfort. For any thing we know to the contrary, the fiery centre of our own planet may be inhabited by beings who could not even conceive the possibility of life on its surface. Again the spaces which we call a perfect vacuum between one planet and another, and between one solar system and another, may be inhabited by beings to whom the ether through which light is transmitted, is what the sea is to fishes. All that Mr. Proctor shows is all that any man of science can show—that judging by the only analogies we have, organic life *like our own* can not exist in any of the suns and on a great many of the planets which make up the subjects of astronomical study. No one can bind the power of conjecture; nor need it be denied that there may be plausible moral grounds for conjectures for which there are no physical grounds. If any one thinks that it derogates from the goodness of God, as otherwise made known, to believe, for instance, that the solid crust and fiery centre of a planet is not as thickly populated as its surface is, or that there ever was a series of ages when even the surface itself was destitute of life, such a person may have very fair moral grounds for conjecturing that the interstellar spaces are all peopled by inhabitants of some kind, and that the pre-organic age of the Earth was an age in which invisible beings, or at least beings which left no physical traces of their existence, dwelt upon it. But even to such a person Mr. Proctor's lectures should show thus much—that life, *as we know it*, is the exception, and not the rule, in the universe; that an indefinite number of ages must have elapsed in the case of

every astronomical body whose existence we know, without the appearance of what *we mean* by organic life, and that an indefinite number of ages will elapse after that which we call organic life has ceased to be. Well, that at least shows that even if the infinite universe be teeming with finite life in some sense, the purposes and conditions of that life must be wholly different, in an infinitude of tracts both of space and time, from what they are in the world so familiar to us. Why, then, should we not accept the far easier and equally reasonable conception that finite life of any kind fills up but a few insulated points in the infinite solitudes of the universe, though the infinite mind is, of course, present through all the infinitudes both of space and time? The study of astronomy certainly brings home, as no other study can, the certainty that life, like ours at all events, is not wanted everywhere, because it is not conceivable everywhere; that the number of thoughts and purposes in which neither we nor any beings like us have any share, must be infinite, even as compared with those equally deep, and to us, of course, much more interesting, thoughts and purposes in which we have a vivid share; that what seems to us the wastes of time and space, are simply the theatres of infinite power and reason quite beyond our knowledge; and whether, therefore, they are the abodes of other finite creatures or not, must be for us immaterial. There is a real lesson in the certainty that the spaces in which the forms of force we know, do not exist, are infinitely large, in comparison with those in which such forms of force do exist; and that even in worlds in which such forms of force as we are familiar with exist, there are an infinite number of both regions and times in which they are inconsistent with the kind of physical life best known to us, as compared with the number of those regions and times in which such physical life might possibly be. It may be said that this only comes, after all, to saying that the unknown occupies a vastly greater proportion of the universe than the known. But it is more than this. For it is clearly reasonable to suppose that the same relation which exists between the *quantity* of space in which there is life like ours, and the immeasurable spaces in which there can be no such life, exists also between the *quality* of what is

known to us and what is unknown;—in other words, that the powers and purposes which are beyond our apprehension are as infinitely above those which are within our apprehension, as the times and spaces devoted in the universe to what we know and can understand, are to the times and spaces devoted to what we do not know and can not understand. If that inference be warranted, astronomy suggests, with almost physical irresistibleness, the absolute infinitude of God, in the only sense in which infinitude has any real meaning for finite beings.—*The Spectator.*

REMINISCENCES OF A SCHOOLMASTER.

II.

MY student's home at college had no little to do in the formation of my character and in shaping my destiny. The rules of the institution required students to room in the college building and to take their meals at the college refectory. The certificate of a physician, however, procured me the privilege of living in the town. The place chosen for me, with the approbation of the Faculty, was at a students' boarding-house, kept by an aged widow lady and a maiden sister, some few years her junior. A sickly boy found there good care, the price for boarding and lodging being $1.50 a week. The expense per year of my education at college, including boarding, lodging, lights, fuel, books, tuition, traveling, in a word all my outlays, with the exception of that for clothing, was less than $150. You will thus see how much more a dollar was worth in 1828 than at the time of the present writing, June, 1874. Nor had boys at college in those days the expensive habits which are now seen in our young collegians. For this, however, parents have none to blame but themselves, for, "as the old cock crows, so crows the young."

—— Ne crimina nostra sequantur
A nobis geniti.

Or, better still, let us have no vices which our children can follow.

I spent every day much of my leisure time in the parlor of my venerable hostess, conversing with her and her sister. They belonged to one of the best families in the State of ——. Their brother, much their senior, had shared in the Revolutionary struggle, and the sisters had the history of our contest for freedom at their fingers' ends, interspersed with anecdotes, traditions and incidents about their brother and others of earlier and contemporary periods, which deeply impressed my young mind. If, as I believe, I had something to do in forming public opinion, and in calling forth and guiding public action during the late Rebellion, the fire of patriotism that burned within me was, in no small measure, kindled by frequent converse with these patriotic ladies. And thus we receive and impart. These ladies fired my zeal for my country, and I in my turn fired the zeal of more than one youth, who did good service in his country's cause. I remember our first public meeting held in this, the place of my abode, to counsel and take action in view of the atrocity at Fort Sumpter. It was held in the largest church of the city, and was filled to its utmost capacity. It was the writer's privilege to be first called on to speak, and the oldest man in the meeting, venerable for piety and patriotism, greater even than his years, said to me, "You gave the key-note to the patriotic words and deeds of this meeting." But judge of my surprise, when on learning of this one, and the other one of my pupils who had enlisted after the meeting, I was informed that —— was among the number. I immediately sent for him, and asked with no little earnestness: "What on earth led you to enlist?" His reply was, "Why, you told us to do so." "Yes," said I, "I told the hale and hearty fellows to do so, and not a weak and sickly young fellow like you." But to the war he would go, though it was not long before he was sent back *hors de combat*.

My kind hostess and her sister had also much to say of the students, who in former years had occupied the room of which I was now a tenant. And these persons, then filling high and important places in Church and State, seemed to my youthful mind to be hovering around my room as genii loci, making it a hallowed spot. One of these former occupants was mentioned oftener and more at length than

all the rest—Rev. Dr. ——, who, at the time of my college course, was president of the largest and best college west of the Alleghanies. In her estimation, there was but one other greater man, whom she had ever seen, and that one was Rev. Dr. ——, former president of our college, and the intimate friend of Jonathan Dickinson, author of Farmer's Letter, and Dr. Benjamin Rush. Of these two presidents, teacher and pupil, I heard nearly every thing which Sprague's Annals of the American Pulpit relates, and much more which is not there. And there I became impressed with the thought that it was a high and honorable vocation to teach, and that to do so successfully, one must be imbued with some of the love of learning and erudition which marked the elder president, and the zeal and success in teaching which so eminently distinguished them both. It was my privilege to entertain for a night the latter person at my house, near the close of his life. We talked over our common Alma Mater, our common college society, our common college home, and the many things we had in common both of this life and the life to come. And when we bade each other farewell in the morning, there was a felt bond between us, which, had he lived, would have ever called forth sympathy and kindness for me and mine whenever he met them, and it has called it forth in me unto his, when I have met those who were honored in having him as their sire. Twelve or fifteen years after that attric night, a grandson bearing the grandsire's name became a pupil in the institution, where I held a post of instruction. It was with an interest, of which I gave no explanation to the youth,—kindled in my college home, and burning brighter from the fresh fuel ministered on that well remembered night, that I taught the grandson this and the other thing which shall be nameless. And now the pupil has written books, which the teacher loves to read, and the teacher owns that there is a pleasant glow around his heart when one comes along and says: "Mr. —— was a pupil of yours, and I heard him say he was greatly indebted to your instruction." Well then if I have not written books my pupils have, and good ones too.

COLOR IN ANIMALS.

THE variety of coloring in animal life is one of the marvels of nature, only now beginning to be studied scientifically. It is vain to say that an animal is beautiful, either in symmetry or diversity of color, in order to please the human eye. Fishes in the depths of the Indian seas, where no human eye can see them, possess the most gorgeous tints. One thing is remarkable: birds, fishes, and insects alone possess the metallic coloring; whilst plants and zoophytes are without reflecting shades. The mollusca take a middle path with their hue of mother-of-pearl. What is the reason of these arrangements in the animal kingdom? It is a question which cannot be satisfactorily answered; but some observations have been made which throw light on the subject. One is, that among animals, the part of the body turned towards the earth is always paler than that which is uppermost. The action of light is here apparent. Fishes which live on the side, as the sole and turbot, have the left side, which answers to the back, of a dark tint; whilst the other side is white. It may be noticed that birds which fly, as it were, bathed in light do not offer the strong contrast of tone between the upper and lower side. Beetles, wasps, and flies have the metallic coloring of blue and green, possess rings equally dark all round the body; and the wings of many butterflies are as beautifully feathered below as above.

On the other hand, mollusca which live in an almost closed shell, like the oyster, are nearly colorless; the larvæ of insects found in the ground or in wood have the same whiteness, as well as all intestinal worms shut up in obscurity.

This relation between coloring and light is very evident in the beings which inhabit the earth and the air; those are the most brilliant which are exposed to the sun; those of the tropics are brighter than in the regions around the North Pole, and the diurnal species than the nocturnal; but the same law does not apparently belong to the inhabitants of the sea, which are of a richer shade where the light is

more tempered. The most dazzling corals are those which hang under the natural cornices of the rocks and on the sides of submarine grottoes; while some kinds of fish which are found on the shores as well as in depths requiring the drag-net, have a bright red purple in the latter regions, and an insignificant yellow brown in the former. Those who bring up gold-fish know well that to have them finely colored, they must place them in a shaded vase, where aquatic plants hide them from the extreme solar heat. Under a hot July sun they lose their beauty.

The causes to which animal coloring is due are very various. Some living substances have it in themselves, owing to molecular arrangement, but usually this is not the case; the liveliest colors are not bound up with the tissues. Sometimes they arise from a phenomenon like that by which the soap-bubble shows its prismatic hues; sometimes there is a special matter called pigment which is united with the organic substance. Such is the brilliant paint, carmine, which is the pigment of the cochineal insect, and the red color of blood, which may be collected in crystals, separate from the other particles to which it is united.

Even the powder not unknown to ladies of fashion is one of Nature's beautifying means. That which is left on the hands of the ruthless boy when he has caught a butterfly, is a common instance; but there are birds, such as the large white cockatoo, which leave a white powder on the hands. An African traveler speaks of his astonishment on a rainy day to see his hands reddened by the moist plumage of a bird he had just killed. The most ordinary way, however, in which the pigment is found is when it exists in the depths of the tissues, reduced to very fine particles, best seen under the microscope. When scattered, they scarcely influence the shade; but when close together, they are very perceptible. This explains the color of the negro: under the very delicate layer of skin which is raised by a slight burn there may be seen abundance of brown pigment in the black man. It is quite superficial, for the skin differs only from that of the European in tone; it wants the exquisite transparency of fair races. Among these, the colors which impress the eye do not come from a flat surface, but from different

depths of layers in the flesh. Hence the variety of rose and lily tints according as the blood circulates more or less freely; hence the blue veins, which give a false appearance, because the blood is red; but the skin thus dyes the deep tones which lie beneath it; tattooing with Indian ink is blue, blue eyes owe their shade to the brown pigment which lines the other side of the iris, and the muscles seen under the skin produce the blueish tone well known to painters.

The chemical nature of pigment is little known; the sun evidently favors its development in red patches. Age takes it away from the hair when it turns white, the coloring-matter giving place to very small air-bubbles. The brilliant white of feathers is due to the air which fills them. Age, and domestic habits exchanged for a wild state, alter the appearance of many birds and animals; in some species the feathers and fur grow white every year before falling off and being renewed; as in the ermine, in spring the fur which is so valued assumes a yellow hue, and after a few months, becomes white before winter.

It would, however, be an error to suppose that all the exquisite metallic shades which diaper the feathers of birds and the wings of butterflies arise from pigments; it was a dream of the alchemists to try to extract them. Their sole cause is the play of light, fugitive as the sparkles of the diamond. When the beautiful feathers on the breast of a humming-bird are examined under the microscope, it is astonishing to see none of the shades the mystery of which you would penetrate. They are simply made of a dark-brown opaque substance not unlike those of a black duck. There is, however, a remarkable arrangement; the barb of the feather, instead of being a fringed stem, offers a series of small squares of horny substance placed point to point. These plates, of infinitesimal size, are extremely thin, brown, and, to all appearance, exactly alike, whatever may be the reflection they give.

The same process which nature has followed in the humming-bird is also found in the wing of the butterfly. It is covered with microscopic scales, which play the part of the feather, arranged like the tiles of a house, and taking the most elegant forms. They also lose their color under mag-

nifying power, and the quality of reflection shews that the phenomena are the same as in feathers. There is, however, a difference in the extent of the chromatic scale. Whilst the humming-bird partakes in its colors of the whole of the spectrum from the violet to the red, passing through green, those of the butterflies prefer the more refrangible ones from green to violet, passing through blue.

There is the same difference between the metallic hues of creatures endowed with flight and the iris shades of fishes, that there is between crystallized bismuth and the soft reflections of the changing opal. To have an idea of the richness of the fish, it is only necessary to see a net landed filled with shad or other bright fish. It is one immense opal, with the same transparency of shade seen through the scales, which afford the only means of imitating pearls. It is due, however, not to the scales, but to extremely thin layers lying below the scales under the skin and round the blood-vessels, which look like so many threads of silver running through the fish. Réaumur first noticed and described them; sometimes their form is as regular as that of a crystal, and of infinitesimal size and thickness. The art of the makers of false pearls is to collect these plates in a mass from the fish, and make a paste of them with the addition of glue, which is pompously named "Eastern Essence." This is put inside glass beads, and gives them the native whiteness of pearls.

Many observations have been made lately by our naturalists as to the defence which color supplies to animals: hares, rabbits, stags, and goats possess the most favorable shade for concealing them in the depths of the forest or in the fields. It is well known that when the volunteer corps were enrolled, and the most suitable color for the riflemen was discussed, it was supposed to be green. Soldiers dressed in different shades were placed in woods and plains, to try which offered the best concealment. Contrary to expectation, that which escaped the eyes of the enemy was not green, but the fawn color of the doe. All the birds which prey upon the smaller tribes, and fishes like the shark, are clothed in dead colors, so as to be the least seen by their victims.

There is an animal which, for two thousand years, has excited the curiosity and superstition of man by its change of color—that is, the chameleon. No reasonable observation was ever made upon it, until Perrault instituted some experiments in the seventeenth century. He observed that the animal became pale at night, and took a deeper color when in the sun, or when it was teased; whilst the idea that it took its color from surrounding objects was simply fabulous. He wrapped it in different kinds of cloth, and once only did it become paler when in white. Its colors were very limited, varying from gray to green and greenish brown.

Little more than this is known in the present day: under our skies it soon loses its intensity of color. Beneath the African sun, its livery is incessantly changing; sometimes a row of large patches appears on the sides, or the skin is spotted like a trout, the spots turning to the size of a pin's head. At other times, the figures are light on a brown ground, which a moment before were brown on a light ground, and these last during the day. A naturalist speaks of two chameleons which were tied together on a boat in the Nile, with sufficient length of string to run about, and so always submissive to the same influences of light, etc. They offered a contrast of color, though to a certain degree alike; but when they slept under the straw chair which they chose for their domicile, they were exactly of the same shade during the hours of rest—a fine sea-green that never changed. The skin rested, as did the brain, so that it seemed probable that central activity, thought, will, or whatever name is given, has some effect in the change of color. The probability is, that as they become pale, the pigment does not leave the skin, but that it is collected in spheres too small to affect our retina, which will be impressed by the same quantity of pigment when more extended.

It is undoubtedly the nerves which connect the brain with organs where the pigment is retained. By cutting a nerve, the coloring-matter is paralyzed in that portion of the skin through which the nerve passes, just as a muscle is isolated by the section of its nerve. If this operation be performed on a turbot when in a dark state, and thrown into a sandy

bottom, the whole body grows paler, excepting the part which cannot receive cerebral influence. The nerves have, in general, a very simple and regular distribution: if two or three of these are cut in the body of the fish, a black transversal band following the course of the nerve will be seen; whilst, if the nerve which animates the head is thus treated, the turbot growing paler on the sand, keeps a kind of black mask, which has a very curious effect.

These marks will remain for many weeks, and what may be called paralysis of color has been remarked in consequence of illness or accident. Such was seen in the head of a large turbot, the body being of a different color. It was watched, and died after a few days, evidently of some injury which it had received. The subject offers a field of immense inquiry: the chemical and physical study of pigments, the conditions which regulate their appearance, their intensity, and variations under certain influences; the want of them in albinos, and the exaggerated development in other forms of disease. To Mr. Darwin, in England, and to M. Ponchet, in France, the subject is indebted for much research, which will no doubt be continued as occasion offers. —*Chambers' Journal.*

HON. JAMES M. BARNARD, Treasurer of the Agassiz Memorial Fund, writes that he has thus far received $7,800. Subscriptions are still coming in. Many who desire to contribute towards the fund, but were unable to do so on the day fixed, the 28th of May, have written to ask if the subscription books will be open until Fall. We are requested to say that they will be, and that schools may make up and send their contributions after they assemble in September. We hope that the teachers and pupils who have not yet subscribed to this fund will do so as soon as possible. They have seldom been appealed to for a more worthy object. It is a peculiarily pleasant thing to know that the fund has been raised by a large number of small subscriptions. The Treasurer's address is Room 4, 13 Exchange St., Boston, Mass.

TEACHING TO SING AT SIGHT.

THE fact that the efforts which have hitherto been made to teach the masses the art of singing at sight, have been virtually fruitless must be conceded by all whose attention has been drawn to this subject. Not only is this the case with the masses, but it is rare to find a young lady or gentleman of leisure and means who can sing at sight. The great majority of those who do sing, have learned to do so by dint of memorizing, assisted by a musical instrument or by another's voice. The drudgery inseparably connected with this method of learning music, has caused many to abandon it at the very outset; while but few of those who have persevered have been rewarded with the power of singing a piece of music, as they would read a book.

Why is it that so very few are able to sing at sight? Is it due to deficiency of vocal powers? It will be readily admitted that we acquire the ability to converse through the medium of the organ of hearing. Why should not any individual possessing ability to thus acquire speech, be also capable of imitating musical sounds? The common answer to this is, that there are some persons who have no musical ear. We must believe that such persons differ only in their organization; that teachers with perseverance and patience, and possessing tact in teaching, can overcome what may be defective in the musical organization of any intelligent person. The true cause seems to be the lack of ability to read music.

There are, however, no more difficulties to be encountered in the study of music than in the study of language. The majority of people possess by nature vocal powers sufficient to sing a song of ordinary difficulty and compass, just as they possess vocal powers to read a book. In either case the difficulty consists in this, that the mind is not able to catch at sight the significance of the characters employed by the author or composer to represent his thoughts. But musical characters are no more difficult to read than words; there are no more notes or tones within the compass of the voice, than letters in our alphabet. There are no more

combinations of this musical alphabet, than there are of the alphabet of language, representing thousands of words, pronounced according to numerous rules with many exceptions; the pauses are not more difficult than points of punctuation; poetry has its rhythm as well as music. In fact, while the art of reading written language is not in all respects comparable with that of reading music, still a strong analogy will be found to exist between them.

If therefore we had a system for teaching the reading of music, possessing the exhaustive analysis, together with the progressive arrangement to be found in the ordinary methods of teaching children to read, they would as quickly be taught to read music as to read their books. This is shown by the readiness with which a little child or even an adult will catch and sing the air of a song, while forgetting, or rather not learning, the words. If we are right in the conclusion that the majority of people possess by nature ability to correctly sing music of ordinary difficulty, and if we are right in the further conclusion, that the art of reading music is no more difficult than that of reading words, then it is fair to conclude that the difference in results, the ability to read words and the failure to learn to read music, is due to difference in methods.

Ask any person who is able to read to recall the method by which he was taught. He will inform you that he first learned the alphabet thoroughly; that he was then taught to spell syllables and afterwards words. When thus familiarized with the various combinations of letters, he began to read the simplest sentences. Grammar or the science of language was not taken up until he was able to read with facility. If now we ask the few who can read music at sight by what method they acquired this ability, and to particularize the steps in the process, so that we might in the same manner acquire the art, the answer will generally be that they scarcely know by what process they attained this result; it seemed to come to them naturally. In one case a scientific method has been intelligently followed, in the other the method has been unscientific, and even if faithfully pursued, could lead to no perfect result.

What we think is needed, for teaching music-reading, is a

method somewhat upon the following plan. The commencement of the work should contain nothing but the simplest explanations, divested of scientific phraseology, and expressed in the simplest words, so that the ideas presented may be at once comprehended by the mind of a child. These explanations should be accompanied by simple practical exercises upon a portion of the scale, which should present to the mind of the child no greater difficulties than the alphabet does. These elementary exercises should be followed by more progressive ones, so arranged with simple guides or aids, that pupils can rely upon themselves to prepare the lesson for recitation, without the assistance of an instrument or of a teacher's voice. Nothing resembling melody should appear in the exercises for acquiring intonation, since whenever they contain melody, their rendition is the result of memory not of study. When some knowledge of the above work has been acquired, the subject of measure should be taken up. Afterwards the difficulties of position, arising from transposition. Before however entering upon this branch of the subject, intonation should be studied in the major and minor modes, so that pupils can without difficuly sing in some one position, simple as well as some of the more difficult intervals. After the pupil is well advanced in intonation, and has learned the theory of measure so as to sing exercises of ordinary difficulty in it, and has acquired the ability to recognize the different positions of the scale, it would then be proper and advisable, that he should apply this knowledge of the theory of music, and the skill in its rendition thus acquired, in reading melody.

It is usually suggested that young children should, even during the preliminary exercises, be taught songs by ear at the close of each lesson, either as a reward for their patience during exercise work, or as a pastime. The unsoundness of this view may be shown by analogy. Take the case of a pupil learning to play the piano. What would be said if at the close of every lesson the teacher should assist the pupil to play a piece by ear or rote? Would not such a practice be condemned as pernicious? The study of instrumental music in this respect should in no wise differ from that

of vocal music. If teachers will persist in teaching their pupils songs by ear, let them refrain at all events from doing so while they are *teaching* music.

We have thus given the merest outline of what we consider the correct theory of instruction. It would be almost impossible to enter into its details, without writing a work upon the subject, to do which is not the province of this article. We trust, however, that some one of the numerous writers upon this subject will adopt our theory, and give us a work founded upon the principles here set forth.

ANCIENT TROY.

THE discovery by Dr. Schliemann in his excavations at Hissarlik, of what he considers to be ancient Troy, has excited much discussion as to whether Troy ever really existed, and, if it did, if it was situated at Hissarlik. Those who believe in the existence of the city are divided as to its situation, some affirming it to have been at Bounarbashi, and others at Hissarlik. There are objections to accepting the latter as the site of the ancient city which at present appear insuperable. Without however discussing this subject it is interesting to enquire whether the Troy described by Homer was the actual city, and the question is raised in *Every Saturday* as to whether Homer, as much in the dark as we, did not take the Pelasgic ruin at Bounarbashi for the lost site. The reply to this involves several considerations. In the genealogical dispute between Achilles and Æneas (Book xx.), the latter repeats what seems to be the earliest tradition of Troy, that before the city was built the people of his race dwelt on the slopes of Ida. Troy was, then, the first city in the Troad, and if Homer had no definite information on the subject, he was justified in supposing the oldest ruin to be that of Ilion, the sacred, built by the gods. At his day there was little chance of confounding the more recent city at Hissarlik with the Pelasgic city, and the words put in the mouth of Æneas furnish another argument,

if more were needed, against Hissarlik; for Schliemann finds under his Troy a more ancient and yet more civilized city, which is thus seen to be absolutely inconsistent with the Homeric hypothesis.

Again, Homer describes, in terms not to be mistaken, the position of a tumulus of great size on the shores of the Hellespont as that raised over the ashes of Patroclus and Achilles. The tumulus still exists, and must have been raised for some important commemorative use, and if any such were due to an event later than the Trojan war, would Homer, or any ancient Greek author, not have known of it, and would he have dared divert it from the known use to suit poetical purposes, especially in a day when poetry was regarded as a sacred medium for the preservation of what were believed to be important facts? The universal concurrence of tradition, admittedly anterior to the Iliad, renders it impossible that Homer should have invented or falsified important details of an almost sacred character, merely to furnish vraisemblance to his poem. The poetic imagination could not use its fire to nobler purpose than in painting the heroic struggle against fate and force of fated Hector; but what poetic necessity other than that of obeying the duty of a poet in preserving the dignities of heroes could be met by Æneas's recital of his genealogy as the son of Anchises, who was the son of Capys, who was the son of Assaracus, who was the son of Tros, who was the son of Dardanos, who was the son of Jupiter? That the poet himself recognizes the incougruity to the imaginative sense is shown by his making Æneas say that both he and Achilles already knew each other's parentage, and after the pedigree, "but in the midst of this combat let us not talk like children." If then he delays with all these details, it is because they were a necessary part of the history he sung, and because the traditions he recounted were clear and definite, as delivered to him, and it is utterly incredible that with such detail on secondary matters the age of Homer should have lost the traditions of the site of Troy.

The question, then, reduces itself to this: Was there ever a Troy, and if so, did the author of the Iliad correctly locate it? The concurrence of traditions with the Egyptian in-

scriptions which have been interpreted, leave hardly a rational doubt of the former; and as to the latter, the existence of a city of that mythical period known as the Pelasgic on the heights of Bounarbashi—the situation itself, the fittest in that portion of Asia Minor for an important and powerful city; the universality of the early belief in this city, as shown by the visit of Xerxes to it, which we can hardly concede to have been caused by his knowledge of the Iliad; the overwhelming importance which the Trojan war had in the feeling of all Hellas, and which, while it might greatly magnify the glory and heroism of it, could scarcely allow so important an item to pass out of knowledge; and, above all, the scarcely-to-be-disputed consideration that it was the Trojan war and the Hellenic pride in it which made the Iliad, not the Iliad which made the pride or invented the war—all these considerations, duly weighed, will leave the balance of probabilities so much in favor of the actual war and an actual Troy, substantially the basis of the Iliad, that we should be more surprised if the poem were found to be a pure fiction even than to find it true history. It is next to impossible that circumstances for three thousand years should have so combined as to make such a chain of evidence.

So that, myths and all considered, all the uncertainties and limitations of the poetic imagination duly weighed, there does not seem to be sufficient reason for rejecting the hypothesis of the existence of an actual city which would have been the object of a struggle between the Greek and Asiatic tribes, for doubting that the author of the Iliad intended to designate Bounarbashi as the site of Troy (if the Iliad were the result of a kind of school of poetry, there was still less probability of the designation being made without reliable traditional knowledge). The probabilities are enormously in favor of its being the site sought for, and somewhat in favor of finding something, by complete excavation, to indicate such to be the fact.

But while this latter point is very uncertain, there is one test which would almost certainly determine this exceedingly curious (and, if determined, very important) point in ancient history, *i. e.*, the excavation of what must have been

the position of the Greek army itself. The chance of variation of this position is limited in one direction; for east and west the limits of the plain are invariable, and the plain has only grown northward, being shut in by hills on each side. The ground occupied by a camp, for even half the years the Trojan war is supposed to have lasted, would inevitably have been covered with an immense deposit of all kinds of rubbish, which the washing of the river would only cover deeper. A trench driven along that part of the plain parallel to the course of the river would, to a certainty, throw up some trace of the camp—not gold and silver vases, or valuable arms, but broken weapons and little trifles not worth picking up in their day, but now worth more than Schliemann's gold and silver put together, since they would not only confirm one of the most important traditions of the classical world, but give a means of ascertaining approximately its date, and so prove or disprove all the assigned dates of early Greek history. If anything *were* found there of the nature sought, it would complete the chain of circumstantial evidence which the topography of the Iliad has begun, and, besides fixing a point in history, give us the earliest object of archæological interest to which a positive place can be assigned in the classical cycle. The Trojan war is the field where the mists of mythology begin to disclose personality and history; to find something of this epoch would enable us perhaps to fix the period at which the change took place. We must not be so exacting or so credulous as Schliemann, and ask for something which shall be Agamemnon's or Ajax's; but a broken lance, a shattered helmet or fragment of a shield, the foundations of a wall, or some article which served as a medium of exchange, would illuminate that mythic twilight in a marvellous way.

It is said that New York State is to have two more educational magazines soon.—One the *Illustrated Educational News*, published in New York City, and the other a journal to be issued from Cape Vincent.

EDUCATION OF WOMEN.

OUR modern life is in some respects drying up, and our young men are too often mere sticks, without a living idea of generous inspiration. They sometimes do their utmost to spoil young women, and young women repay the folly with added grace and assiduity. The true womanhood, in its quick perception, ready wit, flashing intuition, personal devotedness, and high fidelity, must come to the rescue. She must show us that under her interpretation reason is not a cold and heartless rationalism, but a genial, loving wisdom, with a ray as glowing as it is luminous for our pathway and our home. She can teach us that virtue is not a hard law, a dull formalism, a harsh negation, but a living inspiration, drawing power from the eternal love, and going forth in healthful freedom to its conflict and to its peace. All men may confess to a share of weakness for the ring of pretty girls who are found almost everywhere trying to make mediocrity charming, and to keep up the old routine of empty show and petty clique. We understand in some degree the power of that ring of graces when they pass into favored establishments, the pet wives of husbands whose principles and aspirations are not always the better by this charming petticoat government. But among the girls and the matrons we have seen enough of what a true woman can be to make us wish and strive that she may be a more frequent fact and power in these new times that threaten dangers as well as promise privilege, and call upon men and women to study together the science and the art of the social order which they are to suffer or to enjoy together. We often call our time the age of mechanism, but it ought to be the millennium of idealty and faith: for within all the facts of nature and history mysterious forces move, and over all the supreme love presides. If men are too often fogetting the more humane and divine view of the universe, and becoming as soulless as the machines by which they make their money, women do not tend that way, and even their faults vindicate the emotions, and do not wholly deny the ideal sphere. The true culture under the supreme

guidance will give woman due power for man's sake as well as her own, and bring the marvelous quickness of her perceptions, the flash of her intuitions, and the richness of her genius into the true life. She has more genius than man in proportion to the measure of her faculties, and Hartmann well says that young men should associate with women for the best incentive, for you can find men in their books, but women must be seen in actual society to be appreciated. They have certainly done wonders in our age by their books, and the century that has given us "Corinne," "Consuelo," and "Romalo" may, before it closes, show us a type of society worthy of the womanly fascination that appears in those pages. If they can do so much in print, where so much of their form, movement, and spirit is kept back, what will they not do in society when full culture is given to their powers, and full sweep is allowed to their graces and charms? Perhaps there is danger that they will have too much power, and imperil masculine sense by their witching art. If so, the remedy is in more education, not less, and a new day will come when women will have science enough to check their frequent folly, and to bring far-seeing wisdom to the service of their beautiful tastes.—*Harper's Magazine.*

HINTS FROM THE REPORTS.

FROM various reports of State Superintendents of Public Instruction we make the following extracts. Teachers and school officers will find them valuable.

It is a false idea that almost any kind of a person can teach small children. The argument that our children are all small and backward, and therefore do not need a thoroughly educated teacher, is fallacious in the extreme. The reason so many men and women in our midst are incompetent to transact business, are such poor readers, such miserable penmen, display such ignorance of the common operations of arithmetic, and use such ungrammatical expressions, is not because they did not have opportunities to study. for most of them spent from three to ten years in

the school-room, but it is directly chargeable to their teachers. A great responsibility rests on the shoulders of school boards for having such incompetent persons to instruct the youth of their districts.

——I wish to remind school officers and teachers of the influence of inanimate objects upon the lives, minds and characters of children. Parents seldom think of this, and often wonder why their children seem so negligent and careless in their habits. Many times children, having neat and comfortable homes, where everything is in order and the educational influences are all that they should be, find it a continual struggle to overcome the debasing effects of the school-room and its surroundings. It is too common for parents and school officers to think it a matter of very little consequence how the school-house looks, so that it is reasonably comfortable: even comfort is not considered indispensable, if the children can only manage to remain each day the required length of time, and perform their allotted tasks. Teachers, too, whose voices should ever be raised against such barbarous treatment, pass on through term after term without ever entering a protest against it.

——Every teacher, as soon after the commencement of his term of school as practicable, should make it a sacred binding duty to visit all the families in the district having children to be educated, seek the coöperation of the parents, and secure, if possible, the regular attendance of the children at school. By an early acquaintance with the people, frequent friendly visits to the parents, and the manifestation of a warm personal interest in the educational welfare of the children, the teacher gains a prestige that cannot fail to produce the best results. Absenteeism, truancy and tardiness, the bane of all schools, may, in a measure, be broken up through this system of visitation.

——The papers of many applicants for admission to the Normal School were very faulty in respect to the correct use of language, the construction of sentences, the use of capital letters, and spelling. In view of such facts, I cannot repeat too frequently, nor emphasize too strongly, the words of Everett in speaking of the great importance of

these elementary branches:—"They are the foundation, and, unless you begin with these, all your flashy attainments, a little natural philosophy, and a little moral philosophy, a little physiology, and a little geology, and all the other *ologies* and *osophies*, are but ostentatious rubbish." "If," says a distinguished educator, "to make room for what are termed the higher studies, it is necessary to remove the so-called lower, it strikes one that the room is hardly worth the making, for, without the lower to support them, the higher must be insecure; and the more these are expanded, the larger the plan of the superstructure, the larger also, and the more substantial, must be the foundation."

——There is not enough of school missionary work done. It is no less the duty of teachers to *preach school* than to teach school. It often occurs that parents need instruction with reference to a due appreciation of the importance of their duties toward the school. If they are careless, negligent and listless, the children will be the same. The teacher's influence should not only be felt and acknowledged in the school room, but it should pervade the whole district. He should not be a mere pedagogue, but an earnest and true teacher in the highest sense of the word. Then child, parent and citizen will hear his instructions, acknowledge his power and obey his precepts.

AT the recent Convention of the Deaf Mute Teachers at Worcester, the President gave an account of a new method of investigating the mechanism of speech, invented by Mr. Oakley Coles, of England. He covers the whole of the upper part of the mouth with a mixture of mucilage and flour. He then articulates a sound. Wherever the tongue has come in contact with the upper part of the mouth, the flour is removed from the upper part and deposited on the tongue.

CREAM OF THE EDUCATIONAL MONTHLIES.

THE *Chicago Teacher* sensibly says that it is the duty of teachers to interfere to save pupils from the injury and demoralization consequent upon parties, sociables, etc. It is proper and beneficial for children to have plenty of recreation, but it should be of a kind that will not interfere with school duties. Parents often allow children to attend late parties, because they do not realize the injury it does them, and if they notice their haggard looks, they attribute it to hard study. A word on this subject from the teacher may do much good. Another good hint to teachers is contained in an editorial paragraph. It counsels them to be careful in their personal habits and manners, since an unfortunate trait may, through ignorance, be copied by pupils. Many children are not taught at home how to behave, and watch the teacher as a model to be followed. While it might not be advisable to employ a teacher of etiquette, it certainly is well to have the instructors quietly give lessons in that branch by their examples. The *Teacher* has changed hands, and is consequently improved. The present number abandons that peculiar style of writing which has heretofore characterized it. It has opened a department for "Selections." Among the original articles are "Examinations" and "Drudgery."

Home and School, in an article on "Training Children," gives a hint which parents and teachers would do well to heed. The writer relates his experience in raising chickens when a small boy; how in his zeal he visited the poultry-yard many times a day, and each time took up the "dear little chicks" to caress them, until they died from excessive care. Children may, like chickens, be handled too much. They should have good surroundings, and be shielded from what is hurtful, but they will never reach their full stature, mentally, morally or physically, unless they are left in great measure to their own healthy, natural instincts. This same idea of letting children alone is touched upon in an article, rather inaptly named "The Universal Aspiration." It treats of the proper education of girls, and the "aspiration"

is that of the parents, that their daughters may be fitted to worthily occupy their positions in the world. "Trial by Jury" justly condemns our system of selecting for jurymen those of our citizens who are endowed with a "plentiful lack of wit." The other articles are, an account of the capture of Aaron Burr in Alabama, Rhythem, etc.

The *Massachusetts Teacher* discusses "The Educational Value of Music," meaning by music, not the mere power to sing or play, but a comprehensive study of the principles and practice of the act. Music taken in this latter sense is a valuable aid in giving a symmetrical development to the mind and character, and it is well-nigh indispensable in a curriculum which aims not alone at imparting information, but at giving culture. Music is not, as is so generally supposed, wholly æsthetic; it renders people intellectual, and it therefore properly finds a place in our public schools. "Concentration of Power on Few Studies" argues that many subjects pursued at the same time distract the mind, and suggests in most cases attention should be given to only two studies, besides an art study. An article entitled "Remarks" condemns insufficiently ventilated school-rooms and uncomfortable seats, and urges the necessity of properly arranging the amount and method of work. The "Vermont Department" of the *Teacher* has not thus far been well sustained.

EDUCATIONAL INTELLIGENCE.

THE fourteenth annual meeting of the National Educational Association will be held in Detroit, Michigan, on August 4th, 5th, and 6th. The Grand Trunk and Great Western Railroads will carry members for one and one-third fares for the round trip. The Detroit and Bay City railroad will reduce its fare one half. Other roads have declined to make any reduction from regular rates. The Northern Transportation Line of Steamers will carry members from Chicago to Detroit and return for $14.00. Teachers desiring to go by this route must apply to Hon. J. L.

Pickard, Superintendent of Schools, Chicago, for a recommendation to the company. His address is 84 Lasalle St. Hotel rates will be as follows: Russell House, $3.00 per day; Biddle House, $2.00 to $3.00; Michigan Exchange, $2.50; Antisdell House, $1.50; Franklin House, $1.50 to $2.00; Cass House, $1.50 to $2.00; Howard House, $2.00.

The following is the programme for the General Session:

Report of the Committee on *Upper Schools*—the subject of Dr. McCosh's paper last year. Rev. George P. Hays, President Washington-and-Jefferson College, Pa., chairman of committee.

A National University. President A. D. White, of Cornell University, is expected to present the leading paper on this subject. The subject will be farther discussed by President Noah Porter, of Yale College; Superintendent John Hancock, of Cincinnati; and Superintendent W. T. Harris, of St. Louis.

Sex and Education. It is intended that there shall be an opportunity for a full discussion of this subject by exponents of the leading views concerning it. Dr. Edw. H. Clarke, of Boston, will present the first paper.

Prof. J. K. Hosmer, of the University of Missouri, will read a paper on *Co-education of the Sexes in Universities.*

A third paper will be presented by Prof. James Orton, of Vassar, entitled *Five Years in Vassar College.*

General Eaton, U. S. Commissioner of Education, will be unable to fulfil his engagement to make one of the evening addresses. One evening address will be delivered by William R. Abbott, of Bellevue, Va. Subject—*The Profession of the Teacher.*

Want of space prevents giving in full the programmes of the different departments. The subjects selected for discussion are of great interest and importance to teachers, and prominent educators will take part in the debate upon them.

The Connecticut State Teachers' Association will not assemble until October 23d. Its meetings will be held in New Haven.

The State Teachers' Association of Iowa will be held in Des Moines on the 25th, 26th and 27th of August.

The Maine State Educational Association will this year assemble at Rockland. The time has not yet been definitely fixed, but it will probably be the last week in August.

The Minnesota State Teachers' Association will convene at Owatonna on the 18th of August. Its sessions will continue three days.

The New York State Teachers' Association will convene in Binghamton on Tuesday, July 28th. Its sessions will continue three days.

The Pennsylvania State Teachers' Association will be held at Shippensburg on the 11th, 12th and 13th of August.

The West Virginia State Teachers' Association will meet at Clarksburg, August 4th, and will continue in session for four days.

NEW YORK.—ALBANY.—The eleventh anniversary of the University Convocation of New York was held at Albany on the 7th, 8th and 9th of July. The exercises consisted of reading of papers on various subjects relating to schools, their management, etc. The academic section adopted a resolution to appoint a committee to make arrangements for an inter-academic rhetorical contest, to be held under the auspices of the Regents. In the college section a similar resolution, relating to inter-collegiate contests, was adopted. This idea, if faithfully carried out, will have a tendency to raise the standard of oratory among our students. Prof. Tayler Lewis read an interesting paper entitled "The Old Schoolmaster." Essays were also read by Prof. Bancroft, of Andover; Dr. Jewell, of the Poughkeepsie High School; Prof. Bradley, of the Albany High School; Prof. Branch, of the Forrestville Free Academy, and others. Dr. Mears read a paper by Prof. Chester, of Hamilton. Chancellor Pruyn presided at the sessions.

AN illiterate young woman assured her lover that she held her prayer-book upside down because she was left-handed, and could not read in any other way.

CURRENT PUBLICATIONS.

WE are gradually learning that it is useless to try to cram children's heads with dry facts, and are contenting ourselves with giving them only the salient points of different subjects. On this principle many of our school-books are now made. One of these, "Seven Historic Ages," by *Arthur Gilman*, is before us. It takes up the principal events of history, and, treating them in a pleasant style, makes the subject very interesting. History is told in informal talks with children, and the book thus assumes the form of a story, so fascinating to the little folks. To tell the truth, it is attractive to adults, as witness the interest with which we have read it through.

Written on the same principle of giving only prominent historical facts, is a later work by the same author—"First Steps in General History." In this, the conversational style is dropped, but the author has retained a simplicity and directness which make the book very pleasing. The work is, as part of its title names it, "a suggestive outline." The student needs a general survey of the whole field before he devotes himself to the study of particular countries or times, and this general view Mr. Gilman's book is admirably calculated to give. Clearness is a chief characteristic of the volume, a quality which shows itself in the narrative and in the maps. On the latter only those names are given which are really called for. The consequence is, that the pupil retains a definite idea of the country of which he is studying. An excellent suggestion made by the author, and one that we should be glad to see carried out, is to associate the study of biography, geography and literature with history. This would awaken a deeper interest in the study, and would result in great profit to the pupil.

A. H. Mixer, A.M., has compiled an excellent "Manual of French Poetry." Commencing with Malherbe, with whom the classic period of French poetic literature begins, he gives extracts from the writings of French poets down to the present time. The selections are judiciously made, and, as far as we have been able to discover, are unexcep-

tionable in moral tone. The writings are chronologically arranged, which of course prevents a progressive arrangement of the materials. This, however, will be easily remedied by a skilful teacher. A good feature of the work is the introduction of short biographical sketches of the authors.

President Andrews, of Marietta College, has done a good work in giving us a "Manual of the Constitution of the United States." By far the greater part of our young men grow up with no knowledge of the history or principles of the government under which they live, and are consequently unfitted for the duties of citizenship. The present volume will aid in correcting this. It sets forth the origin and object of governments generally, and gives an account of the formation of our own government. The Constitution is then considered in detail, and the book closes with some general information concerning the duties and salaries of officers.

Few amusements afford so much innocent pleasure as private theatricals. A good collection of plays is therefore a valuable addition to the family library. A book of this class, "The Amateur Actor," by *W. H. Venable*, has just been published. It contains about twenty-five plays, and gives some useful hints to amateurs. The only objection we see to the book is, that some of the plays, as for example Little Red Riding-Hood, require scenery and acting beyond the resources of amateurs.

THE Kindergarten system of education has become so popular that many teachers are adopting it in their schools, some we are afraid without much comprehension of its philosophy or its methods. Dealers in Kindergarten toys are often requested to instruct purchasers in the use of the various gifts, which they of course have not the time to do. A little book which will prove useful to these would-be learners, has been prepared by *Heinrich Hoffmann*, who, under the title of "Kindergarten Toys, and how to use them," explains the first six gifts, and gives hints as to the proper way of employing them. It is a sensible, practical little book, and will, as far as a book can do so, help thos

who wish to become kindergartens. Kindergartens, however, cannot be made by books. A thorough training is indispensable.

A GOOD book of dialogues is a rare publication. It is so difficult to make the work simple so that children will enjoy it, and yet not silly. "Model Dialogues" by *William M. Clark* is, we are sorry to say, an addition to the silly class. The book contains about seventy-five pieces. Some of them are good, but the large majority are poor. In many the language is stilted and unnatural, as for example when bootblacks and newsboys talk about being unable "to purchase any new clothes," although they "need them sadly enough."

A VERY useful book is "A New Treatise on the French Verbs," by *Alfred Hennequin, M.A.* Regular verbs are mastered by means of their terminations instead of by mechanical memorizing, and the irregular verbs are taught by an improved classification. Even those who have learned French verbs according to the old system, and do not care to study them over again, will find this neat little manual a convenience as a reference book.

THE subject of Etymology continues to attract attention, and we have now to notice a work, "A School Manual of English Etymology, and Text-book of Derivatives, Prefixes and Suffixes," by Epes Sargent, in which the author has tried to avoid the rut followed by compilers of the Smith and Saunders grade. Modern authorities are cited in the preface, but it is difficult to know what to do with the books of the old-fashioned compilers, or with a twaddler like Trench, who is low enough in etymology to recommend Richardson in this department.

The Introductory (p. 14-50) presents much useful matter, including a short history of the language, but being a compiler and not an etymologist, the author sometimes slips into the rut of Graham and the old school. He confounds Anglo-Saxon and Saxon, and says (p. 15) that the Saxons called their language English—although *sh* did not then exist. Proba bly by a clerical error, *altar* (p. 19) is made Arabic; *bag* (for

balg) is Germanic, *lemon* is from the Sanscrit, and *caravan* from Persian. The union of condor, wigwam, etc., as American (p. 20), is worse than throwing king, doge, and czar together as European.

On page 33, the suffix *ique* (Fr. ique, Lat iquus) has antique and unique as examples, but the latter is from the Latin unicus, and belongs to *ic*. This misplacement arose from the author's Trenchian respect for spelling, which would place serv-ant under *ant* and subservi-ent under *ent*, as it caused him to give the same suffix to insul-ar and begg-ar (p. 31), although one of his authorities (Haldeman, Affixes p. 117,) makes the latter a form of begg-er. He should have consulted two more of his authorities (March and Latham), also Ellis, on the worthlessness of mere spellings as aids to etymology—spellings which arose from the chance practice of writers who were not etymologists, and who gave us pairs like recede and proceed, sprite and spritely, but giving the same spelling to different words, as in tear (moisture) and tear (to rend). We must be satisfied with the spelling, and must not ask the author by what hocus-pocus he got *hybrid* (p. 22) from *hubris*, or an *aw* vowel from an *i* dipthong in referring (p. 48) *bond* to *bind*.

Mr. Sargent would have done better if he had restricted himself to about four of his fifteen authorities, but on the whole, the Latin and Greek Roots and Derivatives (constituting most of this and similar books) will compare favorably with the best of its predecessors.

W. SPARSWOOD.

A TEACHER relates that he one day dictated sentences to his primary pupils, assigning to each a number as he gave out a sentence, that he might afterwards know to whom the papers belonged. Asking them to read their sentences in succession a little girl, to whom the number 25 had been given, read out with a loud voice, "twenty-five children are a gift of the Lord."

MISCELLANEA.

REV. SAMUEL W. APPLETON, an Alumnus of Rutgers College, on starting out for a voyage around the world, gives five hundred dollars to found a prize, to be called after his mother, the "Elizabeth Appleton Moral Philosophy Prize."

REV. DR. L. VAN BOKKELEN, so well known in connection with all departments of Educational work, has resigned the charge of the "Jane Grey Seminary for Young Ladies," at Mount Morris, in Western New York, and will devote himself to ministerial duties as Rector of Trinity Parish, Buffalo, N. Y. His experience in connection with schools, public and private, is large, and we hope it will in some way be utilized. For twenty years he was at the head of St. Timothy's Hall, Maryland, the largest school for boys in the Southern States. From 1864 to 1868 he was Superintendent of Public Instruction in Maryland, and organized the first State system of Free Public Schools south of Mason and Dixon's line. He has been active in State and National Conventions, and is remembered by hundreds of teachers as President of the National Educational Association, when it met at Trenton in 1869—the largest and most enthusiastic assemblage of teachers ever convened in the United States.

A GRADUATE of Harvard proposes that each alumnus shall insure his life for $500, for the benefit of the college.

A YOUNG LADY, graduating from the Cleveland Female Seminary, chose as the subject of her essay, "The Immoral Influence of Bad Bread," "People who live on bad bread," she said, "need not expect to do much, and for a really sound mind in a sound body man is dependent upon his cooking." She suggests that a part of the graduation exercises of our female seminaries consist of baking bread for the inspection of visitors.

THE following notice, taken from the Maryland Gazette of February, 1774, shows that a hundred years ago teachers, some of them at least, "slaved for their daily bread" after a very literal fashion. "To be sold, a school-master, an in-

dented servant that has got two years to serve. John Hammond, near Annapolis. N. B. He is sold for no fault of his, any more than we are done with him. He can learn bookkeeping, and is an excellent scholar."

KIDO, the head of the Department of Education in Japan, has been murdered.

THIS month it is the *National Normal* that names us according to its own sweet will. It styles this magazine the N. Y. Educational Monthly. This is getting funny.

The Trustees of Dickinson College recently declared the chairs of all professors vacant, but subsequently reelected some of them to their old positions. This action was taken in order to obtain a Faculty which could work together harmoniously.

THERE are at present thirty pupils in the "Practical School of Design" attached to the Boston Institute of Technology. Already several of the older pupils have been engaged for excellent positions upon graduating.

THE Amerikanische Schulzeitung will hereafter be published in Milwaukee, Wis.

AT the Normal College Commencement, in this city, a class of 183 was graduated.

THE Syracuse University graduated seven students this year, three ladies and four gentlemen. Chancellor Winchell has resigned his position, to take the chair of Geological Instruction. Dr. E. O. Haven was elected to succeed him.

AT Yale, one hundred and sixty-three students applied for admission to the Freshman class in the Academical department, and ninety-three were examined for entrance into the Scientific school.

THE *Common School* is wrong in its statement that "Japan offered Mr. Northrop, of Connecticut, $15,000 a year to organize and manage a system of public instruction." Justice to Dr. Murray, the present Japanese Commissioner of Education, demands that we should correct this statement. The office now held by him was not offered to Mr. Northrop; Dr. Murray was the first choice.

PUBLISHERS' DEPARTMENT.

The demand for bound volumes of the American Educational Monthly has been such that our supply of Vol. I, 1864, has become exhausted. Hence we shall be glad to purchase the numbers for 1864 from such of our subscribers as will part with them. Please communicate with J. W. Schermerhorn & Co., 14 Bond St., New York.

Eldredge & Brother, No. 17 North 7th St., Philadelphia, will have ready in August, *Language Lessons for Beginners* and *English Grammar and Analysis*, by Prof. Jno. S. Hart, LL.D., of the College of New Jersey. The advent of these books will be looked for with unusual interest by the thousands of teachers who are using the other text-books by the same author.

Blackwood's Magazine on Dogs.—Speaking of some of Sir Edwin Landseer's life-like paintings, *Blackwood's Magazine* says: "Oh! rare, most rare Edwin Landseer! what name shall we find for thee? Thou Apelles of aged hounds, thou Zeuxis of vigorous doghood, thou Parrhasius of puppies! How we do always long to pat and pet thy pictures! We have in our office a large chromo after Landseer's 'Twins.' This is one of his finest pictures. Two magnificent Scotch Shepherd dogs are reclining upon the top of a shelving rock. At the base is one of those fine sheep, for which England and Scotland are noted, and lying at her feet are lambs. This chromo is offered with T. DeWitt Talmage's great religious and family newspaper, *The Christian at Work*, published at 102 Chambers St., N. Y. Agents are wanted everywhere. Samples sent free upon application. See advertisement."

Murray's Land Surveying has been introduced into some of our best colleges, and wherever known is regarded as a standard work upon this subject.

Dr. Willis' **Catalogus Plantarum**; a Catalogue of Plants growing without Cultivation in the State of New Jersey, will be found a work of great interest and importance to botanists.

The Great Events of History has been very generally examined by teachers, and their testimony in regard to it may be summed up in the one expression, that it is the best book of its kind they have ever seen. It makes the study of history easy and interesting.

It can safely be affirmed that **How to Teach** has been more generally commended by prominent educators and by the press than any other book of its class ever before published. A few of the favorable notices of it are subjoined:

Hon. Newton Bateman, Ill.—"None but *teachers* familiar with the science and art of education, of large and varied personal experience, and intimately acquainted with the needs and details of school-room work, could write such a book."

Hon. Alonzo Abernethy, Iowa.—"I consider it the most practical manual that has come under my observation."

Hon. W. H. Ruffner, Va.—"Can endorse it heartily as a book of very great value. In fact, I suppose that no book of greater practical value has been issued."

John Hancock, Cincinnati, O.—"Think it a book that will be useful to such teachers of graded schools as have an ambition to do their work in the best way."

J. H. Binford, Richmond, Va.—"The book contains many valuable suggestions and hints, and meets a want long felt by our teachers."

R. G. Williams, Castleton, Vt.—"I am very much pleased with it in general and in detail, in plan, and in the carrying out of the plan. It is just what we want."

C. C. Rounds, Farmington, Me.—"Best guide to graded school work which I have seen."

Massachusetts Teacher.—"Of incalculable value to any young teacher who is seeking for the best methods."

Pa. School Journal.—"No young teacher can fail to be benefited by the study of it."

N. Y. State Ed. Journal.—"Abounds in suggestions of value to teachers in any subject."

Home and School.—"Must certainly prove very valuable to young teachers."

Boston Globe.—"A valuable book, in every way worthy the attention of teachers."

Chicago Advance.—"A well prepared and useful book."

College Courant.—"A great help to every superintendent, every principal, every teacher."

N. Y. World.—"It is obvious that its authors have themselves the true idea of teaching."

J. A. Cooper, Edinboro', Pa.; J. Baldwin, Kirksville, Mo., and many other Normal Principals, have proved their high appreciation by ordering this work for their classes.